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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

SHOSHO, CALLIE E

ART UNIT PAPER NUMBER

1714

DATE MAILED: 04/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/941,279

Applicant(s)

SCHLIESMAN ET AL.

Examiner

Callie E. Shosho

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

**DETAILED ACTION**

**Claim Rejections - 35 USC § 112**

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 3-5, 8-12, 14, 16, and 21-27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

(a) Claims 3, 4, 11, 14, 16, 24, and 27 each recite that the coating composition is “substantially free of grit”. The scope of each of the claims is confusing because it is not clear what is meant by “substantially”. Can the composition contain 0.01% grit, 0.1% grit, etc. Clarification is requested.

(b) Claim 5 recites “low molecular weight, partially hydrolyzed polyvinyl alcohol”. The scope of the claim is confusing because it is not clear what is meant by “low”. What molecular weight must the polyvinyl alcohol possess to be considered “low”?

(c) Claim 8 recites “method for making an ink jet recording medium with a coating composition as in claim 1, further comprising the step of...”. The scope of the claim is confusing given that claim 1 is drawn to method of making a coating composition not a coating composition. Further, given that claim 8 recites “further comprising the step of” leads to confusion given that claim 1 is drawn to method of making a coating composition not method of making an ink jet recording medium and thus, it is not clear how claim 8 can further comprise

the step of a different method. The scope of the claim is also confusing because it is not clear what is being claimed - method of making a coating composition, coating composition, or method of making an ink jet recording medium.

Similar questions arise in claim 21, which is drawn to method of making an ink jet recording medium, but depends on claim 13 which is a method of making a coating composition and which refers to the coating composition of claim 13.

**Claim Rejections - 35 USC § 102**

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1 and 2 are rejected under 35 U.S.C. 102(e) as being anticipated by Fukushima et al. (U.S. 5,725,946).

Fukushima et al. disclose method of making an aqueous coating composition wherein the method comprises mixing pigment including silica gel, aqueous binder wherein the binder includes polyvinyl alcohol, sizing agent such as styrene-acrylic resin, and cationic fixing agent such as quaternary ammonium polymer. It is further disclosed that the coating composition possesses pH of 5.5-7.5 (col.4, lines 45-55, col.4, line 62-col.5, line 8, col. 5, lines 62-64, col.6, lines 4-21 and 50-57, and col.8, lines 49-56). Given that Fukushima et al. disclose composition

identical to that presently claimed including polyvinyl alcohol and pigment as presently claimed, it is clear that the composition would inherently be substantially free of grit as presently claimed.

In light of the above, it is clear that Fukushima et al. anticipate the present claims.

**Claim Rejections - 35 USC § 103**

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 3-4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukushima et al. (U.S. 5,725,946)

The disclosure with respect to Fukushima et al. in paragraph 4 above is incorporated here by reference.

The difference between Fukushima et al. and the present claimed invention is the requirement in the claims of (a) solids content of the composition and (b) amount of cationic fixing agent.

With respect to difference (a), there is no disclosure of solids content in Fukushima et al. However, one of ordinary skill in the art would have recognized that the solids content of the composition affects drying time, rheology, etc. of the coating composition.

It therefore would have been obvious to one of ordinary skill in the art to control the solids content of the composition to amounts, including those presently claimed, in order to produce composition with suitable drying time, viscosity, etc., and thereby arrive at the claimed invention.

With respect to difference (b), Fukushima et al. disclose that the composition comprises 100 parts pigment, 10-50 parts binder, and 10 parts sizing agent (col.4, lines 62-65 and example 4). The examples of Fukushima et al. disclose use of cationic fixing agent in amount outside that presently claimed. However, the examples are just a few preferred embodiments of Fukushima et al.

A fair reading of Fukushima et al. as a whole discloses that the cationic polymer can be used in any amount such that the advantages of the invention are not lost (col.6, lines 10-12 and col.3, lines 34-37).

In light of the above, it therefore would have been obvious to one of ordinary skill in the art to choose amount of cationic fixing agent, including that presently claimed, in Fukushima et al. in order to produce composition which effectively fixes dye while still producing composition which has excellent drying properties that produces images with excellent print quality, and thereby arrive at the claimed invention.

8. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fukushima et al. (U.S. 5,725,946) in view of Chen et al. (U.S. 5,942,335).

The disclosure with respect to Fukushima et al. in paragraph 4 above is incorporated here by reference.

The difference between Fukushima et al. and the present claimed invention is the requirement in the claims of specific type of polyvinyl alcohol.

Fukushima et al. disclose use of polyvinyl alcohol, however, there is no disclosure of low molecular weight, partially hydrolyzed polyvinyl alcohol.

Chen et al., which is drawn to ink jet recording sheet, disclose the use of partially hydrolyzed polyvinyl alcohol to produce ink receiving layer with best ink receiving properties (col.5, lines 1-3 and 56-64).

In light of the above, it therefore would have been obvious to one of ordinary skill in the art to use partially hydrolyzed polyvinyl alcohol as the polyvinyl alcohol in Fukushima et al. in

order to produce composition with good ink receiving properties, and thereby arrive at the claimed invention.

9. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fukushima et al. (U.S. 5,725,946) in view of Oliver et al. (U.S. 5,270,103) and Franses et al. (U.S. 4,743,507).

The disclosure with respect to Fukushima et al. in paragraph 4 above is incorporated here by reference.

The difference between Fukushima et al. and the present claimed invention is the requirement in the claims of cooling dispersion before adding sizing agent.

Oliver et al., which is drawn to coated receiver sheets, disclose cooling the dispersion before adding the sizing agent in order to produce color prints with improved print quality (col.9, lines 11-12 and 23-25). However, Oliver et al. do not explicitly disclose the temperature to which the dispersion is cooled.

On the one hand, the broad disclosure by Oliver et al. of cooling clearly encompasses temperatures below 90<sup>0</sup> C including 49<sup>0</sup> C and 38<sup>0</sup> C as presently claimed.

On the other hand, it is well known, as found in Franses et al., that particle agglomeration is prevented when processes occur at low temperature (col.6, lines 8-20).

In light of the above, it would have been obvious to one of ordinary skill in the art to cool the binder dispersion to low temperature, including that presently claimed, in order to produce color prints with improved print quality and prevent agglomeration in the method of Fukushima et al. and thereby arrive at the claimed invention.



10. Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukushima et al. (U.S. 5,725,946) in view of Oliver et al. (U.S. 5,270,103) and Franses et al. (U.S. 4,743,507).

Fukushima et al. disclose method of making an aqueous coating composition wherein the method comprises mixing pigment including silica gel, aqueous binder wherein the binder includes polyvinyl alcohol, sizing agent such as styrene-acrylic resin, and cationic fixing agent such as quaternary ammonium polymer. It is further disclosed that the coating composition possesses pH of 5.5-7.5 (col.4, lines 45-55, col.4, line 62-col.5, line 8, col. 5, lines 62-64, col.6, lines 4-21 and 50-57, and col.8, lines 49-56). Given that Fukushima et al. disclose composition identical to that presently claimed including polyvinyl alcohol and pigment as presently claimed, it is clear that the composition would intrinsically be substantially free of grit as presently claimed.

The difference between Fukushima et al. and the present claimed invention is the requirement in the claims of (a) solids content, (b) amount of cationic fixing agent, and (c) cooling dispersion before adding sizing agent.

With respect to difference (a), there is no disclosure of solids content in Fukushima et al. However, one of ordinary skill in the art would have recognized that the solids content of the composition affects drying time, rheology, etc. of the coating composition.

With respect to difference (b), Fukushima et al. disclose that the composition comprises 100 parts pigment, 10-50 parts binder, and 10 parts sizing agent (col.4, lines 62-65 and example 4). The examples of Fukushima et al. disclose use of cationic fixing agent in amount outside that

presently claimed. However, the examples are just a few preferred embodiments of Fukushima et al.

A fair reading of Fukushima et al. as a whole discloses that the cationic polymer can be used in any amount such that the advantages of the invention are not lost (col.6, lines 10-12 and col.3, lines 34-37).

With respect to difference (c), Oliver et al., which is drawn to coated receiver sheets, disclose cooling the dispersion before adding the sizing agent in order to produce color prints with improved print quality (col.9, lines 11-12 and 23-25). However, Oliver et al. do not explicitly disclose the temperature to which the dispersion is cooled.

On the one hand, the broad disclosure by Oliver et al. of cooling clearly encompasses temperatures below 90° C including 49° C and 38° C as presently claimed.

On the other hand, it is well known, as found in Franses et al., that particle agglomeration is prevented when processes occur at low temperature (col.6, lines 8-20).

It therefore would have been obvious to one of ordinary skill in the art to control the solids content of the composition to amounts, including those presently claimed, in order to produce composition with suitable drying time, viscosity, etc., to choose amount of cationic fixing agent, including that presently claimed, in order to produce composition which effectively fixes dye while still producing composition which has excellent drying properties that produces images with excellent print quality, and to cool the binder dispersion to low temperature, including that presently claimed, in order to produce color prints with improved print quality and prevent agglomeration in the method of Fukushima et al. and thereby arrive at the claimed invention.

11. Claims 13-16 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukushima et al. (U.S. 5,725,946).

Fukushima et al. disclose method of making an aqueous coating composition wherein the method comprises mixing pigment including silica gel, aqueous binder wherein the binder includes polyvinyl alcohol, sizing agent such as styrene-acrylic resin, and cationic fixing agent such as quaternary ammonium polymer. It is further disclosed that the coating composition possesses pH of 5.5-7.5 (col.4, lines 45-55, col.4, line 62-col.5, line 8, col. 5, lines 62-64, col.6, lines 4-21 and 50-57, and col.8, lines 49-56). Given that Fukushima et al. disclose composition identical to that presently claimed including polyvinyl alcohol and pigment as presently claimed, it is clear that the composition would intrinsically be substantially free of grit as presently claimed.

The difference between Fukushima et al. and the present claimed invention is the requirement in the claims of (a) sequential order in which ingredients are mixed, (b) solids content, and (c) amount of cationic fixing agent.

With respect to difference (a), it is noted that Fukushima et al. do not disclose mixing the ingredients in the sequential order as presently claimed. However, given that Fukushima et al. disclose ingredients as presently claimed, i.e. pigment, binder, cationic fixing agent, and sizing agent, and further given that Fukushima et al. do not disclose any order in which the ingredients must be added, it therefore would have been obvious to one of ordinary skill in the art, absent clear and convincing evidence to the contrary, to add the ingredients in any order, including that presently claimed.

With respect to difference (b), there is no disclosure of solids content in Fukushima et al. However, one of ordinary skill in the art would have recognized that the solids content of the composition affects drying time, rheology, etc. of the coating composition.

With respect to difference (c), Fukushima et al. disclose that the composition comprises 100 parts pigment, 10-50 parts binder, and 10 parts sizing agent (col.4, lines 62-65 and example 4). The examples of Fukushima et al. disclose use of cationic fixing agent in amount outside that presently claimed. However, the examples are just a few preferred embodiments of Fukushima et al.

A fair reading of Fukushima et al. as a whole discloses that the cationic polymer can be used in any amount such that the advantages of the invention are not lost (col.6, lines 10-12 and col.3, lines 34-37).

In light of the above, and absent evidence to the contrary, it therefore would have been obvious to one of ordinary skill in the art to mix the coating ingredients in any order, including that presently claimed, to control the solids content of the composition to amounts, including those presently claimed, in order to produce composition with suitable drying time, viscosity, etc., and to choose amount of cationic fixing agent, including that presently claimed in order to produce composition which effectively fixes dye while still producing composition which has excellent drying properties that produces images with excellent print quality, and thereby arrive at the claimed invention.

12. Claims 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukushima et al. as applied to claims 13-16 and 19 above, and further in view of Oliver et al. (U.S. 5,270,103) and Franses et al. (U.S. 4,743,507).

The difference between Fukushima et al. and the present claimed invention is the requirement in the claims of cooling dispersion before adding sizing agent.

Oliver et al., which is drawn to coated receiver sheets, disclose cooling the dispersion before adding the sizing agent in order to produce color prints with improved print quality (col.9, lines 11-12 and 23-25). However, Oliver et al. do not explicitly disclose the temperature to which the dispersion is cooled.

On the one hand, the broad disclosure by Oliver et al. of cooling clearly encompasses temperatures below 90° C including 49° C and 38° C as presently claimed.

On the other hand, it is well known, as found in Franses et al., that particle agglomeration is prevented when processes occur at low temperature (col.6, lines 8-20).

In light of the above, it would have been obvious to one of ordinary skill in the art to cool the binder dispersion to low temperature, including that presently claimed, in order to produce color prints with improved print quality and prevent agglomeration in the method of Fukushima et al. and thereby arrive at the claimed invention.

13. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fukushima et al. as applied to claims 13-16 and 19 above, and further in view of Akiya et al. (U.S. 5,041,328).

The difference between Fukushima et al. and the present claimed invention is the requirement in the claim that the pigment contain at least 10% alumina.

Akiya et al., which is drawn to ink jet recording medium, disclose the use of at least 10% alumina in combination with silica pigment, in order to lower ink absorptivity which results in an increase in both optical density and color density and inhibiting discoloration (col.9, lines 10-38).

In light of the above, it therefore would have been obvious to one of ordinary skill in the art to use at least 10% alumina in the method of Fukushima et al. in order to produce a coating composition which inhibits discoloration and has good optical density and color density, and thereby arrive at the claimed invention.

14. Claims 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukushima et al. (U.S. 5,725,946) in view of Oliver et al. (U.S. 5,270,103) and Franes et al. (U.S. 4,743,507).

Fukushima et al. disclose method of making an aqueous coating composition wherein the method comprises mixing pigment including silica gel, aqueous binder wherein the binder includes polyvinyl alcohol, sizing agent such as styrene-acrylic resin, and cationic fixing agent such as quaternary ammonium polymer. It is further disclosed that the coating composition possesses pH of 5.5-7.5 (col.4, lines 45-55, col.4, line 62-col.5, line 8, col. 5, lines 62-64, col.6, lines 4-21 and 50-57, and col.8, lines 49-56). Given that Fukushima et al. disclose composition identical to that presently claimed including polyvinyl alcohol and pigment as presently claimed, it is clear that the composition would intrinsically be substantially free of grit as presently claimed.

The difference between Fukushima et al. and the present claimed invention is the requirement in the claims of (a) sequential order in which ingredients are mixed, (b) solids

content, (c) amount of cationic fixing agent, and (d) cooling dispersion before adding sizing agent.

With respect to difference (a), it is noted that Fukushima et al. do not disclose mixing the ingredients in the sequential order as presently claimed. However, given that Fukushima et al. disclose ingredients as presently claimed, i.e. pigment, binder, cationic fixing agent, and sizing agent, and further given that Fukushima et al. do not disclose any order in which the ingredients must be added, it therefore would have been obvious to one of ordinary skill in the art, absent clear and convincing evidence to the contrary, to add the ingredients in any order, including that presently claimed.

With respect to difference (b), there is no disclosure of solids content in Fukushima et al. However, one of ordinary skill in the art would have recognized that the solids content of the composition affects drying time, rheology, etc. of the coating composition.

With respect to difference (c), Fukushima et al. disclose that the composition comprises 100 parts pigment, 10-50 parts binder, and 10 parts sizing agent (col.4, lines 62-65 and example 4). The examples of Fukushima et al. disclose use of cationic fixing agent in amount outside that presently claimed. However, the examples are just a few preferred embodiments of Fukushima et al.

A fair reading of Fukushima et al. as a whole discloses that the cationic polymer can be used in any amount such that the advantages of the invention are not lost (col.6, lines 10-12 and col.3, lines 34-37).

With respect to difference (d), Oliver et al., which is drawn to coated receiver sheets, disclose cooling the dispersion before adding the sizing agent in order to produce color prints

with improved print quality (col.9, lines 11-12 and 23-25). However, Oliver et al. do not explicitly disclose the temperature to which the dispersion is cooled.

On the one hand, the broad disclosure by Oliver et al. of cooling clearly encompasses temperatures below 90° C including 49° C and 38° C as presently claimed.

On the other hand, it is well known, as found in Franses et al., that particle agglomeration is prevented when processes occur at low temperature (col.6, lines 8-20).

In light of the above, and absent evidence to the contrary, it therefore would have been obvious to one of ordinary skill in the art to mix the coating ingredients in any order, including that presently claimed, to control the solids content of the composition to amounts, including those presently claimed, in order to produce composition with suitable drying time, viscosity, etc., to choose amount of cationic fixing agent, including that presently claimed in order to produce composition which effectively fixes dye while still producing composition which has excellent drying properties that produces images with excellent print quality, and to cool the binder dispersion to low temperature, including that presently claimed, in order to produce color prints with improved print quality and prevent agglomeration in the method of Fukushima et al. and thereby arrive at the claimed invention.

15. Claims 1-2 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohmori et al. (U.S. 5,279,885) in view of Fukushima et al. (U.S. 5,725,946).

Ohmori et al. disclose method of making coating composition comprising mixing pigment, binder such as polyvinyl alcohol, cationic fixing agent, and sizing agent. The coating is



applied on substrate in amount of 2-20 g/m<sup>2</sup> and then the coating is dried (col.5, lines 31-38, 47-51, and 68 and col.6, lines 9-12 and 57-62).

The difference between Ohmori et al. and the present claimed invention is the requirement in the claims of pH of the coating composition.

Fukushima et al., which is drawn to coating composition for ink jet recording sheet as is Ohmori et al., disclose adding salts to the composition to adjust the pH to 5.5-7.5 in order to produce composition with good color rendering properties, print density, and waterfastness (col.6, lines 15-25).

In light of the motivation for using coating composition with specific pH disclosed by Fukushima et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to control pH of composition of Ohmori et al. to pH of 5.5-7.5 in order to produce composition with good color rendering properties, print density, and waterfastness, and thereby arrive at the claimed invention.

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

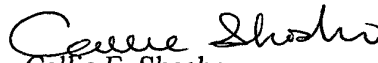
Otani et al. (U.S. 6,214,449) disclose coating composition comprising silica, binder, and cationic fixing agent, however, given the effective filing date, this reference cannot be used as prior art under any subsection of 35 USC 102.

Cahill et al. (U.S. 5,766,398) disclose coating composition comprising silica, binder, sizing agent, and cationic fixing agent, however, there is no disclosure of the pH of the coating composition.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 703-305-0208. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 703-306-2777. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

  
Callie E. Shosho  
Examiner  
Art Unit 1714

CS  
April 1, 2003